DRUM VAULT

I. Summary

The Drum Vault is located in the central area of the Facility (Figure 2). Based on the FI evaluation, the Drum Vault contains both crushed drums and intact drums in poor condition, and approximately 4-6 feet of water-saturated sandy backfill. Although the contents of the drums were not identified, waste materials were visibly present in the drums. Analysis of the backfill and vault water identified several COCs at concentrations that exceeded a regulatory level.

II. Alternatives Considered:

Option 1: Waste stabilization:
Under this approach, the drums, drum contents, and backfill would be mixed with a stabilizing material to reduce the mobility of COCs, as well as to reduce the presence of free water within the Drum Vault.

Option 2: No Further Action:
Under a No Further Action (NFA) approach, no remedy would be implemented to address waste material in the Drum Vault. Drum Vault contents would be left in their existing condition.

Option 3: Removal and off-site disposal
This remedial alternative includes excavation of Drum Vault contents into lined transport trucks. The Drum Vault contents would then be characterized and disposed in accordance with ADPC&E Regulation 23. The volume displaced from excavation will be backfilled with clean, low permeability fill.

III. Evaluation of Alternatives:

Option 1: Waste stabilization:
This approach was considered less practicable than the bulk removal of the contents (Option 3), because the heterogeneous nature of the materials would make selection of appropriate stabilizing agents and mixing of those agents difficult. On balance, given the characteristics of the vault as a defined and limited structure, and even though a stabilization approach could be less expensive, a removal-based approach was considered more practicable and permanent. The estimated cost for waste stabilization is approximately $743,000 (Table 2).

Option 2: No Further Action:
Because no action would be taken to address drum vault contents, there would be no implementation, operations, or decommissioning costs associated with NFA. Given that the integrity of the drums will only deteriorate further with time, the drum vault has the potential to play an increasing role as a source of soil and groundwater contamination in the central plant area. This scenario would reduce remedy costs, but would leave a body of waste materials in place in a manner that could eventually result in a new

release. An NFA approach would have no short- or long-term effectiveness in addressing these conditions.

Option 3: Removal and off-site disposal
The removal of the Drum Vault is considered a final remedy with good long term effectiveness, and is protective of human health and the environment. The estimated cost for Drum Vault removal is approximately $743,000 (Table 2). Details of this estimate are provided in Appendix C.

To aide in the evaluation process, Table xx (see Appendix xx) was developed and compares each alternative to the effectiveness of meeting selection criteria.

IV. Justification for Selection:

Based on the presence of water contained in the Drum Vault at an elevation above the normal water table, the structure currently provides some degree of containment, limiting the release of COCs from within the Drum Vault. When the containment currently provided by the Drum Vault ultimately fails, however, it could result in a new release of COCs to the environment. This would reduce the effectiveness of on-going remedy efforts, and possibly result in an unacceptable exposure scenario. Given this, the recommended remedy for the Drum Vault is the removal of its contents for off-site disposal (Option 3).

V. Selected Remedy/Site Plan:

The removal and off-site disposal of Drum Vault contents (Option 3) consists of the following steps:

1. Demolition and removal of the above-grade portion of the overlying warehouse building.
2. Removal of the concrete slab (i.e., the warehouse floor slab) that covers the Drum Vault.
3. Dewatering of the Drum Vault backfill. All water will be stored and characterized for appropriate disposal. If its quality permits, it may be placed into the POTW inlet at the Facility, subject to the concurrence of the POTW operator.
4. Transferring the drums or drum portions and backfill in bulk from the Drum Vault to lined transport trucks. Based on the observed condition of the drums, individual drum removal is not anticipated to be feasible or necessary. If the Drum Vault contents are determined to be non-hazardous waste, they may be stabilized with flyash, Portland cement, or similar materials prior to removal.
5. Cleaning any residual drum, waste, or backfill material from the Drum Vault.
6. Backfilling the Drum Vault with clean, low permeability fill.